

What is claimed is:

1. A method of managing communications between a set of communication managers and a remote communication manager, the method comprising:

starting a communication channel between a first communication manager of the set and the remote communication manager for transmitting data from a data storage repository to the remote communication manager, the data storage repository being accessible by any one of the set of communication managers;

storing state information for the communication channel in a storage repository accessible by any one of the set of communication managers;

in response to a failure which affects the first communication manager, a second one of the set of communication managers using the stored channel state information to start a new channel instance and resuming transmission of data from the data storage repository to the remote communication manager via the new channel instance.

2. A method according to claim 1, wherein the state information stored in said accessible repository includes an identification of the communication manager which has control of the channel, such that the channels controlled by a first communication manager can be identified following a failure which affects the first communication manager.

3. A method according to claim 2, wherein the state information stored in said accessible repository includes the current status of the channel.

5 4. A method according to claim 1, wherein each communication manager in the set has stored thereon, or accessible therefrom, a definition of each active channel of the communications managers within the set.

10 5. A method according to claim 4, wherein the method comprises:

15 preventing a second instance of a communication channel from being started while a first instance of the channel is in active use by the first communication manager;

20 in response to determining that the first communication channel instance has experienced a failure, starting a second instance of the channel using the channel definition and current channel state information; and

transmitting data using the second channel instance.

25 6. A method according to claim 1, wherein the set of communication managers are a set of queue managers in a queue-sharing group and the data storage repository accessible to any one of the set is a shared-access message queue from which any one of the set of queue managers can retrieve messages for transmission to remote queue managers.

7. A method according to claim 1, including:

storing synchronization information for data transmissions via said communication channel in a second storage repository accessible by any one of the set of communication managers; and

in response to said failure, one of said set of communication managers recovering said first communication manager's data transmissions to a consistent state using the stored synchronization information.

8. A data communications system comprising:

a data storage repository accessible by any one of a set of communication managers;

a set of communication managers, each adapted to start an instance of a communication channel for transmitting data from the data storage repository to a remote communication manager, and each adapted to transmit data via said communication channel;

a storage repository for storing current state information for the communication channel, the storage repository being accessible by any one of the set of communication managers;

wherein the set of communication managers are responsive to a failure affecting a first communication manager of said set which has a first active instance of a communications channel, to start a second instance of the channel using the stored current channel state information and to resume transmission of data from the

data storage repository to the remote communication manager via the second channel instance.

9. A data communications system according to claim 8, including a storage repository for storing synchronisation information for data transmissions via said communication channel, the storage repository being accessible by any one of the set of communication managers;

wherein the set of communication managers are responsive to a failure affecting a first communication manager of said set which has a first active instance of a communications channel, to recover said first communication manager's data transmissions to a consistent state using said stored synchronisation information, thereby to enable transmission of data from the data storage repository to the remote communication manager to be resumed without loss of data.

10. A data communications system according to claim 9, wherein the set of communication managers are a set of queue managers in a queue-sharing group and the data storage repository accessible to any one of the set includes:

a shared-access message queue from which any one of the set of queue managers can retrieve messages for transmission to remote queue managers; and

a shared-access synchronisation queue for storing said synchronisation information.

11. A computer program product comprising computer readable program code recorded on a computer-readable recording medium, the program code including means for controlling the operation of a data communication apparatus to perform the steps of a method of managing communications between a set of communication managers and a remote communication manager, the method comprising:

starting a communication channel between a first communication manager of the set and the remote communication manager for transmitting data from a data storage repository to the remote communication manager, the data storage repository being accessible by any one of the set of communication managers;

storing state information for the communication channel in a storage repository accessible by any one of the set of communication managers;

in response to a failure affecting the first communication manager, a second one of the set of communication managers using the stored channel state information to start a new channel instance and resuming transmission of data from the data storage repository to the remote communication manager via the new channel instance.

12. A data communications system comprising:

a data storage repository accessible by any one of a set of communication managers;

a set of communication managers, each adapted to start an instance of a communication channel for

transmitting data from the data storage repository to a remote communication manager, and each adapted to transmit data via said communication channel;

5 a storage repository for storing synchronisation information for data transmissions via said communication channel, the storage repository being accessible by any one of the set of communication managers;

10 wherein the set of communication managers are responsive to a failure affecting a first communication manager of said set which has a first active instance of a communications channel, to recover said first communication manager's data transmissions to a consistent state using said stored synchronisation information, thereby to enable transmission of data from
15 the data storage repository to the remote communication manager to be resumed.

13. A method of managing communications between a set of communication managers and a remote communication manager, the method comprising:

20 starting a first instance of a communication channel between a first communication manager of the set and the remote communication manager for receiving data from the remote communication manager;

25 preventing a second instance of the communication channel from being started while the first instance of the channel is in active use by the first communication manager;

30 in response to a channel start request from the remote communication manager following a failure which

affects the first communication manager, starting a second instance of the channel between a second one of the set of communication managers and the remote communication manager and resuming data transmissions from the remote communication manager via the new channel instance.

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